1) The ATGAS 2H well control incident at the Chesapeake Appalachia LLC (Chesapeake) ATGAS 2H well pad occurred at approximately 11:00 pm on April 19, 2011 as the result of a mechanical failure of an above-ground valve flange connection at the natural gas wellhead. The incident resulted in a **surface** release of hydraulic stimulation and natural formation fluids (salt water) onto the ground surface at the well pad. There was no subsurface release of fluids or natural gas from the well control incident, or from hydraulic well stimulation operations. **SECTION 1.1.1, PAGE 1-1, FIRST PARAGRAPH**

2) Most of the fluids released from primary containment were captured in pre-constructed sediment catchment basins at the base of the well pad, or were captured by vacuum trucks. A portion of the fluids flowed into a nearby topographically-low drainage swale area that entered a small unnamed intermittent tributary, which flowed into Towanda Creek. Approximately the lower 500 feet of the unnamed tributary received fluids from the release prior to discharge into Towanda Creek. **SECTION 1.1.1, PAGE 1-2, FIRST PARAGRAPH; SECTION 4.9.1, PAGE 4-41, FIRST PARAGRAPH**

3) The volume of well fluids released out of primary containment and not contained was approximately 10,000 gallons, and the out-of-containment release occurred for approximately 4-hours before being fully contained. **SECTI0N 1.1.2, PAGE 1-2, FIRST AND SECOND PARAGRAPHS**

4) Towanda Creek prior to, during, and several days after the release was at high-flow conditions due to record setting rainfall in April, 2011, resulting in a large dilution of the fluids released into Towanda Creek. As a result, only minimal and short-term impacts were noted in Towanda Creek. The small unnamed tributary was also at high flow conditions, and impacts to this unnamed tributary were accordingly minimal and short term. **SECTIONS 1.1.4 AND 1.1.5, PAGES 1-3- TO 1-6, ALL PARAGRAPHS**

5) Chesapeake, in coordination with the Pennsylvania Department of Environmental Protection, and the US Environmental Protection Agency, initiated immediate environmental responses to the incident. During the two weeks following the incident several hundred individual samples from area water wells, springs, and surface waters were collected for analytical testing. Samples from 7 water wells from the residences closest to the release were generally collected on a daily basis for the first 2 weeks. An additional 22 water wells or springs located within approximately a 4,000-foot radius of the ATGAS well were sampled on a weekly basis. All samples from the water wells, springs, and surface water were tested for a comprehensive list of chemical parameters, including chemicals that are used in the hydraulic stimulation fluids and that are found in natural formation water. Most of the water wells and springs sampled as part of this response action had been sampled previously during pre-drill baseline sampling activities. **SECTION 1.2.2, PAGES 1-9 TO 1-10; SECTIONS 5.1.8 AND 5.2.2, PAGES 5-47 TO 5-49**

6) Very little impact was seen in any of the surface water samples, with the exception of short-term impacts to a small farm pond located immediately north of the pad, the drainage ditch swale system, and the lower portions of the unnamed tributary, all of which showed results

indicative of diluted well fluids. In addition, small increases of chloride, total dissolved solids, and specific conductance were noted in Towanda Creek, but swiftly abated and returned to background conditions not later than April 26, 2011(approximately 5 days after the incident). Impact to Towanda Creek was detectable only near the confluence point of the unnamed tributary and a few hundred feet downstream. No key organic compounds associated with hydraulic stimulation fluids were found in samples taken from the unnamed tributary or Towanda Creek. **SECTIONS 4.9.1 PAGES 4-37 TO 4-41; SECTION 4.9.3, PAGE 4-50**

7) The 7 closest water wells to the well pad were generally monitored on a daily basis during the first two weeks following the release. None of the key compounds associated with hydraulic stimulation fluids were found in water samples taken from any of these 7 wells, and all chemical parameters were consistent with pre-drill baseline sampling conducted previously at these well locations, with one exception. Any water quality issues related to these wells were unrelated to the ATGAS incident, and were present in pre-drill baseline samples, with the one exception. All sample analyses from the 7 nearby water wells for the first 2 weeks after the event indicated **no impact** to these water wells as a result of the incident. **SECTION 5.1, PAGE 5-1; SECTION 5.1.8, PAGE 5-47**

8) There was one nearby water well for which water quality was significantly different from the pre-drill baseline sample. Further detailed scientific investigation of this well was conducted and results from that investigation have been reported in a separate special investigation report previously submitted to the Pennsylvania Department of Environmental Protection. It was concluded that changes in water quality noted in this well were unrelated to the ATGAS well control incident, but were related to natural differences in water quality present in this well at varying depths. The Pennsylvania Department of Environmental Protection concurred with this finding. Further, the homeowner of this water well has repeatedly stated that the well was naturally salty from the day it was drilled in 1998 to present, and that the well would become more salty during heavy daily use. **SECTION 5.1.3.8, PAGE 5-20**

9) An additional 22 water wells or springs located within approximately a 4,000-foot radius of the ATGAS well were sampled by SAIC on a weekly basis during the first two weeks following the incident. All samples from the water wells and springs were tested for an extensive list of chemical parameters, including chemicals that are used in the hydraulic stimulation fluids and that are found in natural formation water. No impacts to water quality in any of these 22 water wells or springs were noted as a result of the ATGAS incident. Any water quality issues related to these wells were naturally occurring, and were present in pre-drill baseline samples. **PAGE 5.2.3, PAGE 6-62; PAGE 5.3.2, PAGE 5-64**

10) **No impacts** to biological communities or aquatic biota related to the release were detected in the drainage ditch, the unnamed tributary, or Towanda Creek based upon ecological studies conducted on numerous occasions by a third party consultant. **SECTION 4-8, PAGES 4-35 AND 4-36, ALL PARAGRAPHS**

11) Air monitoring conducted in the area using hand-held and remote units found no levels of concern related to the ATGAS incident. **SECTION 6.2, PAGE 6-2: 7)**

12) Overall, few impacts were realized due to the release of fluids from the ATGAS well control incident. Those that did occur were localized, of short duration, and were confined to surface waters and shallow soils surrounding this site. There were no ecological impacts to Towanda Creek or the unnamed tributary; nor were any impacts noted to nearby or regional water wells or springs. **SECTION 6.4, PAGE 6-3: 1); SECTION 6.3, PAGE 6-3: 4), 5), AND 6)**